The EFFECT *of the* GOLD SUPPLIES *on the* FOREIGN EXCHANGES
between the UNITED KINGDOM *and* FOREIGN COUNTRIES, *and on
the* PRICE *of* SILVER. *By* FRANCIS JOURDAN.

[Read before the Statistical Society of London, 19th February, 1861.]

IN treating statistically the subject of the Foreign Exchanges, it
has generally been considered sufficient to furnish abstracts from
the quotations published by those who are engaged in monetary
transactions of this nature; but such quotations, though adapted to
mercantile operations dependent merely upon arbitrations or inter-
national monetary values existing at any one period of time, are
inefficient when an essential object, as with all statistical inquiry, is
to lay down accurately periodic fluctuations. In bringing before
the Society the modifications essential to produce efficient tables
of the fluctuations in the foreign exchanges, no claim can be laid
to originality, as it will be shown that nearly fifty years ago the late
Mr. Ricardo called attention to the necessity of making similar
corrections before drawing conclusions from the apparent fluctuations
of different periods.

The impossibility of deriving correct results from the simple
collection of facts in their ordinarily accessible form, and the con-
sequent necessity of submitting these facts to a corrective process,
rendering the inquiry somewhat complicated, it will be as well to
explain the causes which give rise to this peculiarity, before laying
down the plan here adopted for producing exchange tables in a
correct form.

The technical term " rate of exchange," expresses the amount
of coin receivable in the money of one country against a *fixed*
amount of coin in another country: thus the rate of exchange here
upon Paris is at one period 25 francs 10 centimes, at another 25 francs
20 centimes:—meaning that at one time 25·10 at another 25·20 are
receivable against 1*l.* of our money. And the currency of France
being now virtually based upon gold, the difference between 25·10
and 25·20 is an exact numerical expression of the alteration which
has occurred in the exchangeable value of the money of each country.
In those cases, however, where the currencies are different, one
country adopting *silver* the other *gold* as a legal tender, the *recorded*
variations in the rates cease to express the *real* exchange fluctua-
tions:—for it is apparent that if a rise or fall has taken place in the
price of *silver*, any fluctuation that has occurred may be partly
attributable to this cause:—for instance, if the price of silver advanced

from 5s. to 5s. 1d. per oz., the monies of those countries having a silver currency would become relatively more valuable than ours, and as the rate of exchange expresses the quantity of that silver money exchangeable for our pound sterling, the rate would naturally decline; in other words, supposing for the moment this rise in the price of silver to be the only active influence, the rate of exchange would fall inversely as 5s. : 5s. 1d. indicating that so much less foreign coin of this enhanced value is equivalent to our pound sterling.   It is, therefore, necessary to consider the fluctuations recorded upon places adopting a *silver currency* as consisting of two parts,—the first part being incidental to any alteration that may have occurred in the *relative values* of gold and silver; the remainder, or second part, expressing the real fluctuation, or that which properly concerns a variation in the rate of exchange.   Therefore to obtain a correct statement of rates dependent upon both metals, it is necessary when any variation has taken place in their relative value, to eliminate so much of the recorded fluctuations as arise from this cause.   The result will then represent the extent of any *real* fluctuation in the exchange, or such as may be said to have its origin in the operations of trade.

Want of attention to another point of minor importance, renders most of the tables hitherto compiled incomplete, these tables giving, in some instances, the rates current for Bills payable *on demand* or three days' sight, and in other cases at three months date; but to express correctly periodic fluctations, the quotations ought, in all instances, to be for bills payable at the *shorter periods,* the variations in the rate of discount causing apparent fluctuations when no real alteration has taken place; no better illustration can be given of the necessity of attention to these points than a reference to an elaborate return to Parliament by the Bank of England, which contains the rates for bills upon Amsterdam, Hamburg, and Paris, for a series of years.   Now these rates are given for Amsterdam and Hamburg at three months' date, and for Paris at three days' sight, and being simple extracts from the published courses of exchange, of course make no allowance for the varying price of silver; for instance, we find Hamburg quoted 13·11¼ (marks and schillings per pound sterling), in April, 1852, and in November of the same year 13·7, and upon Amsterdam at the same periods, the quotations are respectively 12·2 and 11·18 (guilders and stivers per pound sterling), showing apparently a heavy fall in both instances; but as silver had advanced in a greater proportion during the same period, viz. from 5s. to 5s. 1¼d., the rates at the latter period were virtually rather higher, though apparently much lower.*

* The rates given in this return (220 I., Sess. 2) would lead to the supposition that the exchanges on *Amsterdam* and *Hamburg* had fallen fully 1¾ per cent. in

It will, doubtless, be perceived that this apparent anomaly arises from the currencies of Hamburg and Holland being based upon *silver ;* but, in further illustration of the subject, it may be as well to refer to some observations made by Ricardo, in which he says with regard to a set of tables prepared about the commencement of the century—" The accuracy of these tables must be admitted or proved " before the conclusions which result from the inspection of them " can command assent, but so far from this being the case, their " accuracy is disowned by Mr. Mushet (the author) himself, who " acknowledges the false principle upon which his first tables were " calculated, and accompanies the second edition of his pamphlet " with the following notice :—

" ' I have also corrected this mistake of considering the par to be " ' fixed, because gold being the standard of the money in England, " ' and silver in Hamburg, there can be no fixed par between those " ' two countries ; it will be subject to all the variations which take " ' place in the relative value of gold and silver—To find the real par " ' therefore, we must ascertain what was the *relative value of gold and* " ' *silver when the par was fixed,* and what is the relative value at the " ' time we wish to calculate it. As it is universally admitted that " ' gold is the standard measure of value in this country, and that " ' silver performs the same office in Hamburg, it is evident that no " ' tables *can be correct* which assume a fixed invariable par, the true " ' par must vary with every variation in the relative value of the two " ' metals.' " Mr. Ricardo goes on to make another objection to these tables, and says again, " The degree in which the exchange is above " or below par, is calculated by a reference to the prices quoted from " Lloyd's list. Now invariably have these prices been for bills at " two and a-half months, and as the par of exchange is computed " from a comparison of the actual value of the coins of the two " countries, payable *at the same time* in both, and not in one of them " at the end of two and a-half months, an allowance for interest ' must be made for this period."

From this, it appears that Mr. Ricardo objects to the tables he refers to, because, in the first instance, they were prepared without reference to the varying price of silver, and when this error was perceived, the quotations given were always those at two and a-half months date, which may, and frequently do, vary, owing to alterations in the rate of discount, while the rate for bills on demand remains the same.

In comparing, therefore, periodic rates between this and other countries, the most important element is the metal which forms the

seven months, but as *silver* had risen in the mean time as much as 2 per cent. in London, it is clear that the decline in the rates is more than accounted for by this alteration in the price of silver alone.

legal tender for the time being, in the respective countries;—for instance, France and the United States have now *Gold* currencies, while those of Holland, Hamburg, and India are based upon *Silver*. For the purpose of ascertaining our Par of Exchange with countries having a Gold standard, it is simply necessary to compare the quantity of fine gold in the foreign coin with the quantity in our "sovereign," and if the rate of exchange stands at such a point as to show that less fine gold is receivable abroad than is paid here through the operation of purchasing a bill upon that foreign country, the rate is said to be below par, and the probability of an export of bullion varies with the extent of the decline below this par.

In illustration of this, the 20-franc piece, the present virtual legal tender in France, contains 89·617 grains of pure gold, or one franc contains 4·4808 grains ; and our sovereign having 113 grains of pure gold, it follows that there are about the same number of fine gold grains in 25 francs, 20 centimes, as in 1*l.* sterling, in other words the fixed par between London and Paris is about 25·20. Now if the rate of exchange here, upon Paris, is quoted below that point, it indicates that less than 25·20 are obtainable for every 1*l.* sterling, and the rate is then said to be below par.

Our par of exchange with those countries where *Silver* alone is admitted as a legal payment is not a similar fixed quantity, but fluctuates with the price of silver;—thus there are 165 grains of pure silver in a rupee ; at 5*s.* per oz. for standard silver, this would be equivalent to about 1*s.* 10¼*d.* of our money, but at 5*s.* 2*d.* per oz. it would be equivalent to 1*s.* 11*d.*, consequently the par of exchange ranges under these conditions from 1*s.* 10¼*d.* to 1*s.* 11*d.*, showing that when silver is 5*s.* per oz., it may answer to export it to India if the rate for bills is 1*s.* 11¼*d.*, but it would not answer to do so if silver were 5*s.* 2*d.* per oz.

Consequently to ascertain the real fluctuations in the case of those countries which possess a *gold* standard, we have merely to note the simple rise and fall ;—but to make a fair comparison of the periodic fluctuations in our rates upon countries with a *silver* standard, it is necessary to adjust these fluctuations in accordance with the varying price of silver. It may be as well to add that no allowance is here made for the percentage charged by different governments for converting the raw metal into coin, which occasionally affects slightly the profit on export, but of course has no influence on the main object now in view of obtaining the real fluctuations.

Out of the five places now under review, in two of them, namely, *France* and *America*, which have *gold* currencies, we attain, therefore, correct results by merely recording the quoted rates for bills payable on demand. The other three, *Amsterdam, Hamburg,* and

India, with *silver* currencies it is proposed to adjust so as to do away with the disturbing influence caused by variations in the relative value of gold and silver, and to give an estimate of the real fluctuations which it may be assumed would have arisen had the price of silver here remained unaltered, the mode adopted to attain this end is to fix this price at, say, 5*s.* 2*d.* per oz., and having ascertained the *percentage of difference* between the price of silver during any given period, *and this fixed rate of* 5*s.* 2*d. per oz.*, by altering the quoted rates in the same proportion, we attain a correct view of the real *fluctuations* that would have occurred during the same period had the price of silver been constantly 5*s.* 2*d.* per oz.

This will, perhaps, be made clearer by a reference to the formula on which the adjustment is actually based $x = \dfrac{R \cdot a}{S}$ the symbol a representing the average price of silver for any given period, R the quoted rate of exchange during the same time, S the fixed price of 5*s.* 2*d.* for silver as now proposed. R expressing the amount of foreign silver coin given in exchange for our sovereign, must always rise as a, the average price of silver falls, and *vice versâ*, a succession of these equations will therefore distinguish the fluctuations which are independent of the value of silver.

In the following table the annual *quoted* rates for these three places are calculated on the basis of 5*s.* 2*d.* per oz., and are given in parallel columns under the head of *computed comparative rates*.

TABLE A.

Years.	Amsterdam.		Hamburg.		Paris.	India.			New York.	Average Price of Silver per oz.
	Quoted Rates.	Computed Comparative Rates	Quoted Rates.	Computed Comparative Rates.	Quoted Rates.	Quoted Rates.		Computed Comparative Rates.	Quoted Rates.	
	Glds. Stiv.	Glds. Cts.	Mks. sgs.	Mks. cts.	Frs. cts.	*s.*	*d.*	Rps. cts.	Dls. cts.	*s.* *d.*
1852....	11 18·68	11·652	13 7·00	13·120	25·280	2	0·19	9·688	4·8466	5 0·535
'53....	11 16·12	11·713	13 4·02	13·147	25·017	2	0·59	9·684	4·8927	5 1·514
1854....	11 14·48	11·630	13 2·68	13·063	24·994	1	11·55	10·111	4·8890	5 1·505
'55....	11 16·96	11·723	13 4·65	13·151	25·149	2	0·74	9·600	4·9000	5 1·346
1856....	11 16·64	11·713	13 5·04	13·181	25·289	2	0·20	9·817	4·9031	5 1·373
'57....	11 15·96	11·757	13 4·23	13·218	25·230	2	0·69	9·688	4·8729	5 1·786
1858....	11 14·88	11·632	13 5·10	13·193	25·090	2	0·39	9·748	4·8971	5 1·413
'59....	11 13·78	11·695	13 3·18	13·207	25·089	2	0·49	9·807	4·9064	5 2·036

Thus the average quoted rate for Amsterdam in 1852, was 11·18·68 (guilders and stivers), or 11·934 guilders and cents. per pound sterling, and the price of silver 5*s.* 0·535*d.*, the difference

between which and 5·2 being 2·36 per cent., the quotation of 11·934 for 1852, is consequently reduced 2·36 per cent., and the result 11·652 in the second column, is a correct estimate of the rate upon Holland, had silver been worth 5·2 in 1852. The Hamburg annual average rates of exchange are treated in a similar manner. With regard to India, that country having absorbed a very large quantity of silver during the last ten years, and the flow having been chiefly from hence, it is natural to expect that the rates of exchange should have been much influenced by the transmission of this bullion; it is accordingly found, that the exchanges upon *India* have indicated a great demand for remittances, the price charged for bills having frequently been sufficiently over the intrinsic value of the rupee as to cover the expenses of transmitting specie, including insurance and loss of interest during transit; these expenses forming of course the natural limits which the fluctuations in the rate of exchange between any two countries can never permanently exceed. A considerable portion of this silver has come from France, where, owing to the existence of a double standard, the fall in the value of gold compared with silver, has rendered the former metal the more advantageous tender in payment, and gold has extensively replaced the silver coin taken for export to the East.

Before the Indian mutiny, when income and expenditure were more happily balanced than at present, the East India Company had to draw Bills upon the Presidencies against disbursements made in this country, and the rates charged were a fair index of the demand for remittances; and although these drafts were issued at 60 days' sight, they may be more fairly considered as representing the short exchange, the preference given to the Company's paper enabling them to obtain an exceptional rate amounting to about one farthing per rupee above what first-class commercial bills could be obtained at.*   Since the mutiny, however, instead of having to receive money from India, large sums representing the excess of expenditure beyond the requisite disbursements here, have had to be remitted by Government; and although rates are still advertised at which drafts are issued, the rates are fixed so high as virtually to exclude remitters, the insignificant amounts actually drawn being merely obtained by parties not sufficiently conversant with exchange operations to prevent them from incurring unnecessary loss. The rates since 1857 are therefore derived from the quotations for first-class bills, and the annual averages are computed in the parallel column on the basis of

* The quotations given for India from 1852 to 1856 inclusive, are those charged by the *East India Company upon Bengal*, except during a portion of 1855, when the rate was raised so high that the Company were virtually out of the market as drawers of bills.

5·2 per oz., in accordance with the principle adopted for the other countries with silver currencies.

The last column gives the rate in New York for bills at sight upon London. In consequence of the exchange operations with America being almost exclusively conducted on the other side of the Atlantic, any attempt to give the rate *here* upon New York could only have been an estimate derived from the rates quoted there upon London; and as there could be little, if any, advantage in this, our object being chiefly to ascertain comparative rates, the quotations given are those derived from New York. The par of exchange, owing to both countries having a gold currency, is easily ascertained,—the number of grains fine in the eagle of ten dollars is 232, and the grains in our sovereign being 113, it follows that about dollars 4·87 are equal to our pound sterling, which is nearly equivalent to 109⅝, according to the mode adopted in America of estimating the exchange at a fluctuating percentage on the nominal value of 4s. 6d. per dollar.

Recapitulating the chief heads of the inquiry up to the present point, it will be perceived that the mode adopted in the collation of these tables, and which might be extended to future statistics on the same subject, is *firstly*, to ascertain in all cases the rates for *short* bills, these quotations sufficing for countries with *gold* currencies, such as France and the United States, but which, if adopted without modification for places having *silver* currencies, are shown to be misleading; and to obviate this it is proposed, in those cases where the currency is based upon silver, to give, in addition to the current quotations, *computed* rates, which being estimated on a *fixed basis* are such as it may fairly be concluded would have existed had silver not varied from the price of 5s. 2d. per oz., in other words, adopting a fixed par, and enabling the *real* fluctuations, or those dependent on the course of trade, to be distinguished from the *apparent* fluctuations or those derived from the usual price currents.

A further alteration, though one of mere detail, provides that the Indian and American rates shall be stated in *rupees* and *dollars* per pound sterling, instead of *shillings* and *pence* per rupee or dollar; one advantage of this alteration is, that the *higher* quotations upon these places then correspond as in the case of Amsterdam, Hamburg, and Paris, with what are called *favourable* rates, and *vice versâ*, and enables the fluctuations to be more clearly set forth by putting them in the following form—

TABLE B.

Years.	Ratio of Fluctuation in the Foreign Rates of Exchange.						Average Bullion in Bank of England.	Average Discount (Bank of England Rate).
	Amsterdam.	Hamburg.	Paris.	India.	New York.	Totals.		
							Mlns.	Pr. cnt.
1852....................	997	997	1006	992	991	4983	20·7	2⅛
'53....................	1002	999	995	991	1001	4988	17·4	3¾
1854....................	995	993	994	1035	1000	5017	13·9	5⅛
'55....................	1003	999	1000	983	1002	4987	14·3	4⅞
1856....................	1002	1002	1006	1005	1003	5018	11·2	5⅞
'57....................	1006	1004	1004	992	997	5003	10·1	6⅝
1858	995	1002	998	998	1002	4995	17·7	3⅓
'59....................	1000	1003	998	1004	1004	5009	17·9	2⅞

Note.—Table B is constructed as follows :—The number 1000 stands in each case for the *mean* or *average* rate of the eight years 1852-59. Upon *Amsterdam,* for example, the mean of the quotations set forth in Table A, col. 2, is 11·690, consequently this stands for 1000 in Table B, and the rate in the same column for 1852, which is 11·652, being 3·8 cents. or ·03 per cent. lower than the average of the eight years is represented in Table B by 997. The quotation for 1853 is found to be 11·713, or ·02 per cent. *above* the mean, and is consequently represented by 1002, the ratio 997 : 1002 expressing the extent of the fluctuation that occurred in the average rates for the respective years 1852 and 1853.

In this Table (B) the fluctuations in Table A are represented by the variation above or below the number 1000, which is adopted as a datum line or average of the computed *comparative* rates for the eight years under consideration. If the totals (col. 6) representing the collective fluctuations of the five places in this table are compared with the average annual amount of Bullion held by the Bank, it will be seen at once that on the whole the *higher rates* have coincided with low averages of bullion and *vice versâ.* On reference to the annexed statement—

TABLE C.

Years.	Ratios of Fluctuation in Foreign Rates of Exchange.	Average Bullion in Bank of England.
		(Millions.)
1852-53-58-59	4994	18·4
1854-55-56-57	5006	12·4

it will be perceived that in the *four years* 1854, 1855, 1856, and 1857, when the Bullion averaged 12·4 millions, the average aggregate of these exchanges was 5006;—in 1852, 1853, 1858, and 1859, when the Bullion averaged 18·4 millions, the average was 4994;—and although the rates are not invariably high when the bullion is low, there is in no case any indication of that pressure in the form of lower exchanges, which is generally expected to coincide with a diminution in the bullion at the bank.

To investigate this somewhat further it is now proposed to examine the fluctuations in the *European* rates, with reference to the estimated amount of gold and silver Exported and Imported. A parliamentary return printed in 1858, gives the amount of *gold* imported into Europe during the years 1852, 1853, 1854, 1855, and 1856, at 100·9 millions,* and the French author Levasseur states that during the same period 96·1 millions were imported into England, and 4·4 into France. As European places receive, probably, only a limited quantity, except through England and France, the two estimates may be considered nearly to correspond. With regard to *silver* the same parliamentary return gives the import for these five years as an aggregate of 21·8 millions. Levasseur† estimates it much higher or about 31·7 millions. The proportionate amount for each year would, however, be nearly the same, whichever estimate is taken as correct, and the smaller amount is adopted here as the assumed import. With regard to the amount *exported* from Europe, the great drain has, of course, been of *silver* to the East, this appears to have amounted during the eight years up to the end of 1859 to 75 millions, the *gold* sent to the same quarter having been 6·5 millions. The gold exported to other places out of Europe averaged about 2·4 millions annually. In the following Table (D), the figures for the years 1852, 1853, 1854, 1855, 1856, and 1857, are obtained from the parliamentary paper alluded to above;—the estimate for the years 1858 and 1859, from the third and fourth report on the Customs;—the requisite addition for the other European countries during these two years being calculated from the average of the six preceding years, and the published exports from the Mediterranean

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* The estimate given in this return is for the seven years 1851 to 1857 inclusive, and reckons the increase in the *European* stock of Bullion during that period at 80·7 millions, from this is deducted 9·6 millions for the year 1851, which is not included here, leaving 71·1 millions as the addition for the six years 1852 to 1857.

† "La Question de l'Or," by E. Levasseur, 1858.

ports. It must be understood that this return is exclusive of the gold and silver produced *in Europe.**

TABLE D.

Years.	Estimated Bullion retained in Europe.	Average Bullion in Bank of England.	Ratios of Fluctuation in the Continental Rates of Exchange.
	(Millions.)	(Millions.)	
1857.............	3 ·4	10 ·1	3014
'59.............	6 ·9	17 ·9	3001
1856.............	10 ·0	11 ·2	3010
'55.............	12 ·9	14 ·3	3002
1852.............	11 ·3	20 ·7	3000
'58.	16 ·2	17 ·7	2995
1853.............	14 ·5	17 ·4	2996
'54.............	19 ·0	13 ·9	2982

On examining this table it is apparent that some connection exists between the amount of bullion retained in Europe, and the tendency of the exchanges here, the highest rates occurring when least bullion is retained, the lowest when the largest estimated addition is made

* The amount of bullion retained in Europe is estimated as shown in the following table :—

Years.	*Imports* from Producing Countries.			*Exports* to Places out of Europe.			
	Gold.	Silver.	Total.	Gold.	Silver.	Total.	Retained.
	Millions.	Millions.	Millions.	Millions.	Millions.	Millions.	Millions.
1852	15 ·2	4·7	19 ·9	6 ·0	2 ·6	8 ·6	11·3
'53	22 ·4	4·4	26 ·8	6 ·7	5·6	12 ·3	14·5
1854	22 ·1	4·2	26 ·3	2 ·7	4·6	7 ·3	19·0
'55	19 ·9	3·7	23 ·6	2 ·8	7·9	10 ·7	12·9
1856	21 ·3	4·8	26 ·1	2 ·0	14·1	16 ·1	10·0
'57	21 ·4	4·1	25 ·5	2 ·0	20·1	22 ·1	3·4
1858	20 ·0	3·7	23 ·7	1 ·8	5·7	7 ·5	16·2
'59	20 ·0	5·5	25 ·5	2 ·4	16·2	18 ·6	6·9

The amounts of gold and silver imported (cols. 1 and 2) up to 1857, are derived from the Parl. Paper, No. 381. For the years 1858 and 1859, from the report on the Customs of Imports into the United Kingdom, adding 1·2 millions as probable arrivals at other Europeans ports. The *silver* exported is taken from the annual circular issued by Mr. Low of the silver shipped to the East; the exports of silver to other quarters are but trifling in amount, and considered as balanced by excluding the silver *arriving* at other European ports. The *Gold* exported out of Europe is estimated at an average of 1·5 millions in addition to the Eastern remittances, except for the years 1852 and 1853, when large quantities of coin were sent to Australia.

to the European stock; and if taken in series of two years the *Fluctuations* will be found, as in Table E, to follow in regular inverse ratio with the quantities of bullion retained.

TABLE E.

Years.	Estimated Bullion retained in Europe.	Ratios of Fluctuation in the Continental Rates of Exchange.
	(Millions.)	
1854 and 1853	16 ·7	2989
1858 ,, 1852	13 ·7	2997
1855 ,, 1856	11 ·5	3006
1859 ,, 1857	5 ·2	3008

The special feature attaching to the fluctuations set forth in the preceding Table (E) appears to be sufficiently established to warrant further investigation, more especially with reference to the large increase that has taken place during the same period in our metallic circulation. On this point Mr. Weguelin stated to the Committee on Bank Acts, in 1857, that our circulation was supposed then to be equal to about 50 millions sterling, and to have increased 30 per cent. in the previous six years; looking to the fact that 50 millions were actually coined in ten years, up to the end of 1859, it would appear probable that this estimate is too low. Levasseur, the French author before alluded to, considers the metallic circulation in England to have amounted to 60 Millions in 1848, and reckons the addition to the end of 1856, at 40 Millions ; this, on the other hand, is most likely an over-estimate. But in either case, for the sake of the present argument, it can be affirmed that in the absence of heavy drains of bullion, England has been the emporium of large additional quantities of gold, which must, to some extent, have had a tendency to raise the value of other commodities. Under the influence therefore of a large increase in the circulation, an excess of imports would naturally ensue until prices were again nearer a level. Without asserting that this is the sole cause of the phenomenon, it is clear that if imports were thus stimulated, it would affect the exchanges as seen in the present table. For instance, if 18 Millions of gold, arriving from the producing countries, were retained in Europe, 10 Millions or more would probably represent our share ; and supposing this to raise prices for a time, imports being stimulated, while exports were diminished, the rates would naturally *fall;* and assuming the fall to arise from this cause, it would properly bear some proportion to the amount of gold retained in

Europe. In this light it would seem that the main leverage acting at present upon the exchanges, proceeds from the gold arriving from the producing countries. Of that gold a quantity surprisingly equal in its annual amount reaches the shores of Europe, the largest share coming to England. If at the time of its arrival an active demand exists for export out of Europe, it goes immediately to supply the void, and generally after having been exchanged for continental silver. If no such demand exists much appears to be absorbed into the English currency, its action influencing increased imports and low continental exchanges.

Recurring to the fact that lower exchanges in general occur coincidently with high bullion returns, and *vice versâ*, it is probable that this appears an anomaly because a diminution of our reserve is almost invariably supposed to arise from an efflux to other countries, and that by raising the rate of discount which always brings back bullion, this gold is recovered by an increase of exports. That this opinion, however, is to a great extent a fallacy, would appear for the following reasons :—

1st. A partial suspension of business invariably ensues when any stringent measures are adopted by the Bank of England, that is to say, our exports are not, as a rule, increased under such circumstances.

2nd. A comparison of the estimated amounts retained in Europe, with the average amount of bullion in the bank, as seen in Table D, shows that these totals are quite independent of one another, and that the relatively large exports of bullion which occur when least is retained in Europe, do not necessarily affect the amount of bullion in the bank coffers.

3rd. Recent panics have indicated a simultaneous diminution in the reserves of bullion at all the great centres of commerce.

On the strength of these cumulative facts, it appears tolerably clear that an adverse condition of Bullion Reserves during the years now under review, is traceable, not so much to the *balance of trade* being against any one country, as to some universal cause acting simultaneously and sympathetically upon the principal trading communities.

The leading monetary event of the last ten years, namely, the large produce of Gold in Australia and California, has doubtless introduced many novel features ; but a further analysis of the problems presented by this addition to the former stock of precious metals, is beyond the province of the present paper. The facts now brought forward appear, however, to establish the fact that as far as relates to one of the most important practical questions, the position of the Reserves at the chief entrepôts of commerce, we must no longer confine our view to the trade of any one country, or

content ourselves when considering an unexpected drain from the bank, with resting its solution upon the vague, and perhaps, therefore, generally adopted phrase of an unfavourable condition of the foreign exchanges, but study these fluctuations in bullion reserves, more with reference to the general condition of trade, as influenced at present by a large increase in the circulating medium. To throw much light upon this problem, including as it does the general effect of the gold discoveries, and their special influence upon the rate of interest and national reserves, except through the media of facts, would be expected by few, and least of all by the statist; and as a contribution to this end, the present tables are offered, and it is proposed to continue them in the Society's *Journal* for the sake of future reference in their present form, or with such improvements as may be suggested. As, however, *Silver* is quite as universal a standard of value in other countries as gold, the question of the relative value of the two metals becomes of considerable importance, more especially with reference to the large proportionate increase in the quantity of gold, and it is, therefore, proposed to close the present remarks with a few observations based on the fluctuations in the Price of Silver during the last ten years.

It is somewhat singular that the effect of the vast increase in the supply of gold has hitherto been such, that the fact of any depreciation with reference to the value of other commodities, is denied by many competent authorities; this question cannot, of

TABLE F.

Years.	Average Price of Silver in Bars, Standard.	Exports of Silver to the East.	
		From England.	From Mediterranean Ports.
		£	£
1850............	4 11·987	—	—
'51............	5 0·988	1,716,000	—
1852............	5 0·535	2,630,238	—
'53............	5 1·514	4,710,665	848,362
1854............	5 1·505	3,132,003	1,451,014
'55............	5 1·346	6,409,889	1,524,240
1856............	5 1·373	12,118,985	1,989,916
'57............	5 1·786	16,795,232	3,350,689
1858............	5 1·413	4,784,923	911,043
'59............	5 2·036	14,682,671	1,521,970

course, be conclusively decided by a reference to the price of silver alone, as other causes, such as diminished production, or increased

demand for silver, might make it more valuable; but looking at the annual averages in the table below, the evidence afforded appears to favour the opinion that the rise is mainly attributable to a depreciation in the value of gold. In the first place, the rise has been gradual, the years 1850 and 1851 give an average of 5s. -$\frac{1}{2}d$. per oz.,—1852 and 1853 an average of 5s. 1d.,—1854 and 1855 an average of 5s. 1$\frac{3}{8}d$.,—1856 and 1857 an average of 5s. 1$\frac{5}{8}d$.,—1858 and 1859 an average of 5s. 1$\frac{3}{4}d$. The average for the five years previous to 1850, may be taken at about 4s. 11$\frac{1}{2}d$., and the argument that the rise has been caused by the increased demand *for export to the East,* does not appear tenable if examined in connection with the actual amounts exported in each year. Previous to 1851 the exports to India and China were not so regularly reported as at present; in that year the amount exported was only 1,716,100*l.*, consequently before the export had attained dimensions of any magnitude, a rise in silver had been established to the extent of nearly 2 per cent.; in 1852 and 1853 the exports for the two years were 7·3 millions,—in 1854 and 1855 9·5 millions, the excess of 1854 and 1855 over the two preceding years was therefore only 2·2 millions, and yet the price rose about $\frac{5}{8}$ per cent. In 1856 and 1857 the exports amounted to the enormous total of 28·9 millions, in two years, an increase of nearly nineteen millions as compared with the two previous years, yet silver did not rise quite $\frac{1}{2}$ per cent. The amount sent out during the two years 1858 and 1859 was only 19·4 millions, or nine millions and a half less than during the two preceding years, but in silver a further rise was established of nearly $\frac{1}{4}$ per cent. These facts show that the chief advance occurred before silver was sent away in large quantities to India; and though temporary fluctuations have since ensued, a steady rise has been developed, which appears independent of the demand for India, as the fluctuations in the price are seen not to accord at all with the quantities exported.

That silver has risen about 4 per cent., and that this rise is not caused by the demand for export, seems demonstrable from the facts here given; a depreciation in the value of gold appears, therefore, the only reason that can fairly be assigned for the advance which has taken place in the price of silver during the last ten years. Whether the actual depreciation in the value of gold has exceeded this percentage, the available supply from France moderating, as imagined by M. Chevalier, the rise in silver, is a question which it is not now necessary to discuss, but it is important to observe, that the point at which it first becomes profitable to export silver from France in exchange for gold, is, owing to the nature of their double standard, when silver here is worth 5s. 1d. per oz.; and it is remarkable that the price has been much steadier since it attained this point, only rising since, in such measure as might be expected from the increasing

difficulty of procuring coin from a source which it may reasonably be expected is now beginning to fail.

The preceding tables were compiled before the close of last year, and the figures only extend to the end of 1859, the present pressure upon the money market renders it of interest to add some further particulars.

The *Gold* arriving from the *producing countries* in 1860 was less than for some years past; but on the other hand the exports of *Silver* to the East, notwithstanding the Chinese War, have been on a comparatively moderate scale. The Continent, however, appears to have absorbed more bullion than usùal—the result being that more has been *exported* than imported in 1860—and in this respect the year forms an exception to any in the last decade, except perhaps 1857. The average amount of bullion in the Bank of England last year (1860) was 15·25 Millions, and the average rate of discount $4\frac{1}{4}$ per cent., being in each case very nearly the average of the nine preceding years.

The perturbed condition of the money market during the last two months of the year (1860) indicates the presence of the distinctive feature already commented upon, as peculiar to late years in the existence of a simultaneous drain of bullion from the Banks of England and France.

TABLE G.

Years.	Average Amount of Bullion in *Bank of England.*	Average Rate Discount, of Bank of England.	Average Amount of Bullion in Bank of France.	Average Rate of Discount Bank of France.
	Millions.	Pr. cnt. pr. an.	Millions.	Pr. cnt. pr. an.
1852	20·7	$2\frac{1}{8}$	23·6	$3\frac{3}{8}$
'53	17·4	$3\frac{3}{4}$	18·0	$3\frac{1}{4}$
'54	13·9	$5\frac{1}{8}$	16·2	$4\frac{1}{4}$
'55	14·3	$4\frac{7}{8}$	13·6	$4\frac{1}{2}$
'56	11·2	$5\frac{7}{8}$	9·0	$5\frac{5}{8}$
'57	10·1	$6\frac{5}{8}$	9·2	$6\frac{3}{4}$
'58	17·7	$3\frac{1}{8}$	18·4	$3\frac{3}{8}$
'59	17·9	$2\frac{2}{3}$	22·7	$3\frac{1}{2}$
'60	15·2	$4\frac{1}{4}$	20·0	$3\frac{3}{4}$
Average of nine years	15·4	$4\frac{5}{16}$	16·7	$4\frac{1}{4}$

The remarkable sympathy which exists in the annual average reserves of the Banks of England and France, is best evidenced by putting the above returns in series of two years. If grouped in this way, it appears that to end of 1859 the fluctuations in the average amount of bullion held by each Bank have invariably followed in the same order; this will be seen by the subjoined table:—

TABLE H.

Years.	Average Amount of Bullion in *Bank of England,* in Two Years.	Average Amount of Bullion in *Bank of France* in Two Years.	Average Rate of Discount, Bank of England, in Two Years.	Average Rate of Discount, *Bank of France,* in Two Years.
	Millions.	Millions.	Per cnt.	Per cnt.
1852 and 1859	19·3	23·1	$2\frac{1}{2}$	$3\frac{5}{16}$
1853 ,, 1858	17·5	18·2	$3\frac{7}{16}$	$3\frac{1}{2}$
1854 ,, 1855	14·1	14·9	5	$4\frac{3}{8}$
1856 ,, 1857	10·7	9·1	$6\frac{1}{4}$	6

It will also be found that in the case of the Bank of England, the rate of Discount has been constantly maintained *inversely* as the stock of Bullion, and although the same does not hold good with reference to the Bank of France, the deviation is not of sufficient importance to show that the administrators of that Bank have acted upon unsound principles in regulating the rate of discount;—for it must be borne in mind that it was illegal to charge a higher rate than 6 per cent. prior to 1857, and that from this circumstance it was impossible to restrict discounts at the time of the greatest pressure in 1856, except by limiting the term or number of days which the Bills brought for discount had to run.

It would seem that the Average Bullion held by the Bank of England during the *nine* years to the end of 1860, has been 15·4 Millions, and the average rate of discount $4\frac{5}{16}$ per cent.; the Average amount of Bullion held by the Bank of France, including the Branches during the same period, has been 16·7 Millions, and the rate of discount $4\frac{1}{4}$ per cent. The Bullion in the Bank of France on the 10th January, 1861, was about 14 Millions, while our return for the Bank of England gave but little over 12 Millions; this appears to indicate that the pressure has been somewhat more severe here than in France, a fact of which there is but little doubt, as the rate of discount which was raised almost simultaneously at both Banks to 7 per cent., has since been lower in the open market in Paris than in London ; but on the other hand, the comparatively favourable position of the Bank of France is counteracted by the undue preponderance of silver, of which the reserve now consists.

While the above figures show, therefore, a generally cautious policy on the part of the Bank of France, they appear to justify two remarks of some significance ;—the *first* being, that the proper regulator of the rate of interest is the Reserve of Bullion in hand, and that timely attention to this point is as indispensable as it is beneficial;

—the *second*, pointing to the inadvisability of retaining, as by law in France, both silver and gold (in the fixed proportion of 15½ silver to 1 gold) as optional in payment to any amount. Gold being now the cheaper medium for discharging debts has, in consequence, been adopted as the leading currency; but it can scarcely be doubted, apart from the other difficulties which surround this change in the law, that if the silver coins of France were reduced in value, passing, as they do with us, as tokens, and only legal for the payment of small sums, the amount of silver in circulation would largely increase; and an equal amount of gold being thus released from circulation, would naturally flow back to the Bank, palliating without, of course, altogether obviating a pressure like the present one.

These observations may perhaps be considered as an additional testimony, supported by facts, that commercial legislation should rest upon a sound and reasonable basis; and that all such unhealthy expedients as purchasing gold at a premium, or attempting to restrict the rate of interest, may be safely and for ever discarded.